Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A composite magnetic head comprising:

a magnetoresistive head comprising:

a lower magnetic shield disposed above a substrate;

a lower gap layer;

a first ferromagnetic layer;

a non-magnetic layer;

a second ferromagnetic layer;

an anti-ferromagnetic layer having non-magnetic regions on both ends thereof;

first electrode layers disposed respectively on the non-magnetic regions of the anti-ferromagnetic layer, the respective first electrode layers separated from each other;

magnetic domain control layers disposed respectively on the ends of a stack of layers consisting of the first ferromagnetic layer, the non-magnetic layer, the second ferromagnetic layer, the anti-ferromagnetic layer, and the first electrode layers;

second electrode layers disposed above the magnetic domain control layers;

an upper gap layer disposed above the second electrode layers and the stack of layers;

an upper magnetic shield disposed above the upper gap layer; and

an inductive magnetic head disposed above the magnetoresistive head via an insulation layer,

wherein a width in a track width direction between the first electrode layers is smaller than a width in a track width direction [[of]] between the second electrode layers.

2. (Previously presented) A composite magnetic head as defined in claim 1, wherein the non-magnetic regions of both ends of the anti-ferromagnetic layer are formed by implanting impurities into the anti-ferromagnetic material.

3. (Previously presented) A composite magnetic head as defined in claim 1, wherein a width of each of the first electrode layers is 20 nm or less.

4. (Currently Amended) A composite magnetic head as defined in claim 1, wherein the first and the second electrode layers contain one or more of elements of at least Au, [[Ta,]] W, Ru, Rh, Cu, Ti, Ag, Pt, Pd, Cr, In, Ir, Nb and Zr.

5. (Previously presented) A composite magnetic head as defined in claim 1, wherein soft magnetic layers are disposed between the magnetic domain control layers and the second electrode layers.

6. (Previously presented) A composite magnetic head as defined in claim 1, wherein crystal orientation underlying layers are disposed below the magnetic domain control layers.

7. (Withdrawn) A composite magnetic head comprising:

a magnetoresistive head comprising:

a lower magnetic shield disposed on a substrate;

a lower gap layer;

a first ferromagnetic layer;

a non-magnetic layer;

a second ferromagnetic layer;

an anti-ferromagnetic layer having both ends whose width is narrower than that of the second ferromagnetic layer;

first electrode layers disposed on the second ferromagnetic layer at both the ends of the anti-ferromagnetic layer;

magnetic domain control layers disposed respectively on the ends of a stack of layers consisting of the lower magnetic shield, the lower gap layer, the first ferromagnetic layer, the non-magnetic layer, the second ferromagnetic layer, the anti-ferromagnetic layer, and the first electrode layers;

second electrode layers disposed respectively on the magnetic domain control layers; and

an upper magnetic shield disposed on the second electrode layers and the stack of layers by way of an upper gap layer; and

an inductive magnetic head disposed on the magnetoresistive head by way of an insulation layer.

8. (Withdrawn) A composite magnetic head as defined in claim 7, wherein a width of the first electrode layer is 20 nm or less.

9. (Withdrawn) A composite magnetic head as defined in claim 7, wherein the first and the second electrode layer contain one or more of elements of at least Au, Ta, W, Ru, Rh, Cu, Ti, Ag, Pt, Pd, Cr, In, Ir, Nb and Zr.

10. (Withdrawn) A composite magnetic head as defined in claim 7, wherein a soft magnetic layer is disposed between the domain control layer and the second electrode layer.

11. (Withdrawn) A composite magnetic head as defined in claim 7, wherein a crystal orientation underlying layer is disposed below the magnetic domain control layer.

12. (Withdrawn) A composite magnetic head comprising:

a magnetoresistive head comprising:

a lower magnetic shield disposed on a substrate;

a lower gap layer;

a first ferromagnetic layer;

a non-magnetic layer;

a second ferromagnetic layer;

an anti-ferromagnetic layer disposed on a central portion other than both ends of the second magnetic layer;

first electrode layers disposed respectively on both ends of the second ferromagnetic layer;

magnetic domain control layers disposed respectively on the ends of a stack of layers consisting of the lower magnetic shield, the lower gap layer, the first ferromagnetic layer, the non-magnetic layer, the second ferromagnetic layer, the anti-ferromagnetic layer, and the first electrode layers;

second electrode layers disposed respectively on the magnetic domain control layers; and

an upper magnetic shield disposed on the second electrode layers and the stack of layers by way of an upper gap layer; and

an inductive magnetic head disposed on the magnetoresistive head by way of an insulation layer.

13. (Withdrawn) A composite magnetic head as defined in claim 12, wherein a width of the first electrode layer is 20 nm or less.

14. (Withdrawn) A composite magnetic head as defined in claim 12, wherein the first and the second electrode layer contain one or more of elements of at least Au, Ta, W, Ru, Rh, Cu, Ti, Ag, Pt, Pd, Cr, In, Ir, Nb and Zr.

15. (Withdrawn) A composite magnetic head as defined in claim 12, wherein a soft magnetic layer is disposed between the domain control layer and the second electrode layer.

16. (Withdrawn) A composite magnetic head as defined in claim 12, wherein a crystal orientation underlying layer is disposed below the magnetic domain control layer.

17. (Previously presented) A composite magnetic head as defined in claim 1,

wherein the first ferromagnetic layer is provided between the lower gap layer and the non-magnetic layer, and

wherein the second ferromagnetic layer is provided between the anti-ferromagnetic layer and the non-magnetic layer.

18. (Previously presented) A composite magnetic head as defined in claim 1,

wherein the first ferromagnetic layer is a free layer, and

wherein the second ferromagnetic layer is in contact with the anti-ferromagnetic layer.

19-20. (Canceled)